DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
11511 MAIN ST., P.O. BOX 90012
BELLEVUE, WA 98009-9012

# DETERMINATION OF NON-SIGNIFICANCE

**PROPONENT:** Chaohua Chang

**LOCATION OF PROPOSAL:** 1603 143rd Avenue NE

**NAME & DESCRIPTION OF PROPOSAL:** Tian Residence

Construction of a new single family residence on a site with steep slope critical areas and buffers.

**FILE NUMBER:** 12-116571-LO

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.

☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on 9/20/2012

☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so that it is likely to have significant adverse environmental impacts; if there is significant new information indicating, or on, a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project): or if the DNS was procured by misrepresentation or lack of material disclosure.

Environmental Coordinator

9/6/2012
Date

OTHERS TO RECEIVE THIS DOCUMENT:
State Department of Fish and Wildlife
State Department of Ecology,
Army Corps of Engineers
Attorney General
Muckleshoot Indian Tribe

**City of Bellevue**
**Development Services Department**
**Land Use Staff Report**

| | |
|---|---|
| **Proposal Name:** | Tian Residence |
| **Proposal Address:** | 1603 143rd Avenue NE |
| **Proposal Description:** | Critical Areas Land Use Permit for a proposal to reduce a 50-foot buffer from the top of a steep slope critical area to construct a new single-family residence. |
| **File Number:** | 12-116571-LO |
| **Applicant:** | Chaohua Chang |
| **Decisions Included** | Critical Areas Land Use Permit (Process II. 20.30P) |
| **Planner:** | Reilly Pittman, Land Use Planner |
| **State Environmental Policy Act Threshold Determination:** | **Determination of Non-Significance**<br>Carol V. Helland, Environmental Coordinator<br>Development Services Department |
| **Director's Decision:** | **Approval with Conditions**<br>Michael A. Brennan, Director<br>Development Services Department<br>By: _____<br>Carol V. Helland, Land Use Director |

| | |
|---|---|
| **Application Date:** | June 15, 2012 |
| **Notice of Application Date:** | June 28, 2012 |
| **Decision Publication Date:** | September 6, 2012 |
| **Project Appeal Deadline:** | September 20, 2012 |

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

## CONTENTS



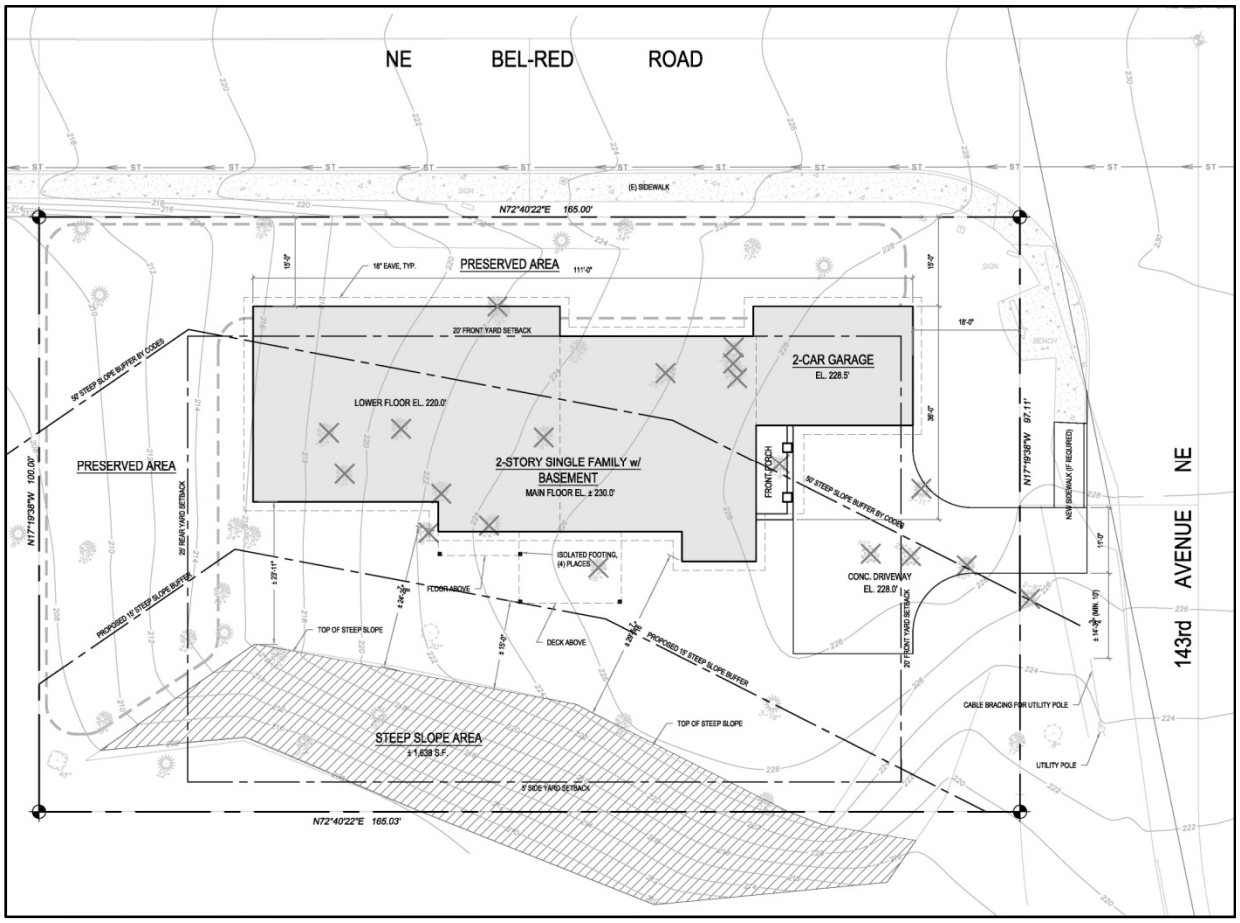
**Attachments**

1. Site Plan – Enclosed
2. Steep Slopes Planting Template – Enclosed
3. Mitigation and Monitoring Template – Enclosed
4. Geotech Report – In File
5. Critical Areas Report – In File
6. SEPA Checklist, Forms, and Application materials – In File

## I. Proposal Description

The applicant proposes to construct a single family residence on an undeveloped property at 1603 143rd Avenue NE. The applicant proposes to reduce the 50-foot top of slope buffer from a steep slope critical area in order to build the house. The house has been located into the front setbacks on this lot to the extent feasible in order to avoid buffer impacts. The condition of the slope and buffer vegetation is degraded by nonnative and invasive plant species. The vegetation will be improved by the proposed mitigation planting in exchange for the reduced buffer as allowed through a critical areas report. This proposal requires the approval of a Critical Areas Land Use Permit for the house to be allowed. See Figure 1 below for a site plan showing the proposal.

**Figure 1**




## II. Site Description, Zoning, Land Use and Critical Areas

### A. Site Description

The project site is located at 1603 143rd Avenue NE in the Wilburton subarea of the City. The property is adjacent to Bel-Red Road along the north property line and 143rd Avenue NE along the east property line. The adjacent properties are residential but there are commercial and multifamily zoned properties within close proximity and on the north side of Bel-Red Road. The steep slope critical areas on the property are located along the southern half of the property, sloping down to the south. See Figure 2 for existing site

condition.

**Figure 2**


**B. Zoning**

The property is zoned R-2.5, single-family residential

**C. Land Use Context**

The property has a Comprehensive plan Land Use Designation of SF-M, Single Family Medium Density.

**D. Critical Areas On-Site and Regulations**

**i. Geologic Hazard Areas**

Geologic hazards pose a threat to the health and safety of citizens when commercial, residential, or industrial development is inappropriately sited in areas of significant hazard. Some geologic hazards can be reduced or mitigated by engineering, design, or modified construction practices. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided (WAC 365-190).

Steep slopes may serve several other functions and possess other values for the City and its residents. Several of Bellevue's remaining large blocks of forest are located in steep slope areas, providing habitat for a variety of wildlife species and important linkages between habitat areas in the City. These steep slope areas also act as

conduits for groundwater, which drains from hillsides to provide a water source for the City's wetlands and stream systems. Vegetated steep slopes also provide a visual amenity in the City, providing a "green" backdrop for urbanized areas enhancing property values and buffering urban development.

## III. Consistency with Land Use Code Requirements:

### A. Zoning District Dimensional Requirements:

The R-2.5 zoning dimensional requirements found in LUC 20.20.010 apply to the proposed house. The plans submitted generally demonstrate conformance with zoning dimensional standards, however conformance will be verified during building permit review.

However, in order to avoid the steep slopes that exist on the site the applicant may use LUC 20.25H.040 that allows reduction of the required 20-foot front setbacks from Bel-Red Road and 143rd Avenue NE if the reduction will reduce the intrusion into the steep slope buffer. The proposed setback reductions from Bel-Red Road will be no less than 15 feet and the front setback from 143rd Avenue NE will be no less than 18 feet. These proposed reductions move the house further away from the steep slope and allow for access around the house. **See Conditions of Approval in Section X of this report.**

### B. Critical Areas Requirements LUC 20.25H:

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes performance standards and procedures that apply to development on any site which contains in whole or in part any portion designated as critical area, critical area buffer or structure setback from a critical area or buffer. The proposed house will modify the 50-foot top-of-slope buffer. The project is subject to the performance standards found in LUC 20.25H.125 which are reviewed below.

#### i. Consistency with LUC 20.25H.125

Development within a landslide hazard or steep slope critical area or the critical area buffers of such hazards shall incorporate the following additional performance standards in design of the development, as applicable. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function.

1. **Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;**
   The house is not placed within a steep slope critical area. The proposed house avoids alterations of the existing grade.

2. **Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;**
   No construction is proposed in the steep slope critical area and preserves most significant vegetation on the site. 18 trees are proposed for removal to construct the house on this undeveloped property. The property is undeveloped and most

likely the trees provide some avian habitat. However, the surrounding neighborhood is extensively developed which limits the sites use by animals other than birds and small mammals. Based on the submitted habitat analysis, the proposal will leave sufficient vegetation on the site and replant so that a corridor of vegetation extending to Kelsey Creek is maintained. The remainder of the slope buffer is proposed to be restored with native vegetation

3. **The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;**
   The project geotechnical engineer (Pioneer Engineering) reviewed the proposal and provided recommendations. The proposed residence with the reduced buffer to 15 feet from the top of slope was determined to be "adequate to protect" from the risk of soil movement on the slope (Geotech Report, Pg. 3). The actual structure will be further than 15 feet from the top-of-slope.

4. **The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes where graded slopes would result in increased disturbance as compared to use of retaining wall;**
   No retaining walls are proposed.

5. **Development shall be designed to minimize impervious surfaces within the critical area and critical area buffer;**
   30 percent of the gross lot area is proposed to be covered by impervious surface which is much less than the 50 percent allowed. Most impervious surface is created by the proposed house and there is minimal driveway except to provide for a vehicle turnaround.

6. **Where change in grade outside the building footprint is necessary, the site retention system should be stepped and regrading should be designed to minimize topographic modification. On slopes in excess of 40 percent, grading for yard area may be disallowed where inconsistent with this criteria;**
   Per this standard, any changes in grade outside the house footprint are required to use stepped retention. No work or development is proposed in steep slope critical areas.

7. **Building foundation walls shall be utilized as retaining walls rather than rockeries or retaining structures built separately and away from the building wherever feasible. Freestanding retaining devices are only permitted when they cannot be designed as structural elements of the building foundation;**
   No construction is taking place in steep slopes where the foundation would be used as retention. No freestanding walls or rockeries are needed to construct the house.

8. **On slopes in excess of 40 percent, use of pole-type construction which**

**conforms to the existing topography is required where feasible. If pole-type construction is not technically feasible, the structure must be tiered to conform to the existing topography and to minimize topographic modification;**
No structures are proposed in slopes in excess of 40 percent.

9. **On slopes in excess of 40 percent, piled deck support structures are required where technically feasible for parking or garages over fill-based construction types; and**
   No structures are proposed in slopes in excess of 40 percent.

10. **Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.**
    Planting is proposed to be located in the reduced 15 foot buffer from the slope on the site which measures approximately 2,200 square feet in area. The planting shall include at least 18 trees to replace those that were cut down for construction. Trees shall be (3)cedar, (10)fir, and (5)maple. In addition at least 3 species of shrubs and ground cover will be planted and can be selected based on the City's planting templates for steep slopes which is Attachment 2. At least 116 shrubs and 500 ground covers are required to achieve a sufficient density. The planting is required to be maintained and monitored for a period of 5 years following installation. Monitoring can be per the City's established maintenance and monitoring template which is Attachment 3. **See Conditions of Approval in Section X of this report.**

**ii. Consistency with LUC 20.25H.140 and LUC 20.25H.145**

Modification of a top-of-slope buffer requires a critical areas report as part of the application for a Critical Area Land Use Permit. The applicant has obtained the services of a qualified geotechnical engineering company to study the site and document the observed conditions. Staff has reviewed the following documents:

- Geotech Report and Critical Areas Report dated June 12, 2012 prepared by Pioneer Engineering Inc.

This geotechnical analysis finds that the proposed 15-foot slope buffer is "adequate to protect the residence from damages caused by soil movement" (pg. 3). The geotech found that "adverse impacts to the steep slope are minimized" by the proposed development (pg. 4). The geotech found the proposal balances "environmental concerns, development cost, and public safety" (Pg. 2). Per LUC 20.30P.170, approval of projects to modify slope buffers or steep slope critical areas require the proponent to complete a Hold Harmless Agreement with the City. The agreement is required to be completed prior to building permit issuance on a form provided by the City. **See Conditions of Approval in Section X of this report.**

## IV. Public Notice and Comment

| | |
|---|---|
| Application Date: | June 15, 2012 |
| Public Notice (500 feet): | June 28, 2012 |
| Minimum Comment Period: | July 12, 2012 |

The Notice of Application for this project was published the City of Bellevue Weekly Permit Bulletin on June 28, 2012. It was mailed to property owners within 500 feet of the project site. No comments were received.

## V. Summary of Technical Reviews

### A. Clearing and Grading

The Clearing and Grading Division of the Development Services Department has reviewed the proposed site development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development and has approved the application.

## VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

### A. Earth, Air, and Water

No large-scale earthmoving activity is proposed other than excavation for the house. Erosion and sedimentation control requirements and BMPs will be reviewed by the Clearing and Grading Department as part of a clearing and grading permit.

### B. Plants and Animals

No significant or important species were identified on the site. The site is adjacent to a City arterial (Bel-Red Road) and is surrounded by urban development. The site is vegetated with significant trees but is isolated and impacted by noise from the surrounding development and streets. The plan includes mitigation planting which will restore trees and provide vegetation cover at the top of slope in the reduced buffer.

### C. Noise

Any noise generated is regulated by Chapter 9.18 BCC. **See Section X for a related condition of approval.**

## VII. Changes to Proposal Due to Staff Review

Staff required that the house utilize the allowance for reduced front setbacks to avoid

impacting the slope buffer in LUC 20.25H.040.

## VIII. Decision Criteria

### A. 20.25H.255.B Critical Areas Report Decision Criteria

**The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:**

1. **The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;**
   The mitigation of native planting will improve vegetation cover at the top of slope which provides slope stability and erosion protection. As part of the building permit for the house a planting plan shall be submitted.

2. **The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;**
   The most important critical area function for the slopes on this site which are slope stability and erosion control are improved.

3. **The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;**
   Stormwater quality will be improved by increased capture of runoff onto the slope from the vegetation to be installed.

4. **Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;**
   A maintenance surety will be required in an amount equal to 100 percent of the cost of materials and labor needed for 5 years of maintenance and monitoring. **See Conditions of Approval in Section X of this report.**

5. **The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and**
   The modifications and performance measures in this proposal are not detrimental to the functions and values of the steep slope.

6. **The resulting development is compatible with other uses and development in the same land use district.**
   Construction of a single-family house is compatible with residential land use districts. Noise generated by construction of the fire pit is limited to the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction

is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. **See Conditions of Approval in Section X of this report.**

**B. 20.30P.140 Critical Area Land Use Permit Decision Criteria – Decision Criteria**

The Director may approve, or approve with modifications an application for a Critical Area Land Use Permit if:

1. **The proposal obtains all other permits required by the Land Use Code.**
   The applicant must obtain required development permits. **See Conditions of Approval in Section X of this report.**

2. **The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer.**
   The required front setbacks have been reduced to allow the house to further avoid the slope buffer.

3. **The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable.**
   As discussed in Section III of this report, the applicable performance standards of LUC Section 20.25H are being met.

4. **The proposal will be served by adequate public facilities including street, fire protection, and utilities.**
   The proposed activity will not impact public facilities.

5. **The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210.**
   2,200 square feet of native planting is required to fully cover the reduced slope buffer. A maintenance surety is required and the proposed planting will be monitored for 5 years. **See Conditions of Approval in Section X of this report.**

6. **The proposal complies with other applicable requirements of this code.**
   As discussed in this report, the proposal complies with all other applicable requirements of the Land Use Code.

## IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of the Development Services Department does hereby **approve with conditions** the reduction of the 50-foot top-of-slope buffer to construct a new single family residence with vegetation restoration. **Approval of this Critical Areas Land Use Permit does not constitute a permit for construction. A building permit, clear and grade permit, and/or utility permit is required and all plans are subject to review for compliance with applicable City of Bellevue codes and standards.**

**Note- Expiration of Approval:** In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a building permit or other necessary development permits within one year of the effective date of the approval.

## X. Conditions of Approval

**The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:**

| Applicable Ordinances | Contact Person |
|---|---|
| Clearing and Grading Code- BCC 23.76 | Savina Uzunow, 425-452-7860 |
| Land Use Code- BCC Title 20 | Reilly Pittman, 425-452-4350 |
| Noise Control- BCC 9.18 | Reilly Pittman, 425-452-2973 |

**The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:**

1. **Building Permit:** Approval of this Critical Areas Land Use Permit does not constitute an approval of a development permit. A building permit and any other associated development permits are required. Plans submitted as part of any permit application shall be consistent with the activity permitted under this approval.

   Authority: Land Use Code 20.30P.140
   Reviewer: Reilly Pittman, Development Services Department

2. **Approved Buffer Modification:** This decision approves a buffer modification of 15 feet from the top-of-slope. This buffer modification does not allow future structures or improvements to be located in the reduced buffer without future review and approval of a Critical Areas Land Use Permit. Geotechnical evaluation may still be required for any future development on the property.

   Authority: Land Use Code 20.30P.140
   Reviewer: Reilly Pittman, Development Services Department

3. **Front Setback:** The front setback from Bel-Red Road is reduced to 15 feet and the front setback from 143rd Avenue NE is reduced to 18 feet. These setback dimensions must be shown on the building permit submittal.

   Authority: Land Use Code 20.25H.040
   Reviewer: Reilly Pittman, Development Services Department

4. **Mitigation Planting Area:** The reduced 15-foot slope buffer is required to be replanted to mitigate the approved buffer reduction as proposed. The buffer measures

approximately 2,200 square feet which is required to be planted at a density which is at least as dense as the City's planting templates for steep slopes in the Critical Areas Handbook. The applicant shall submit a revised planting plan as part of the building permit which is consistent with the requirements in this report.

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Reilly Pittman, Development Services Department

5. **Maintenance and Monitoring:** The planting area shall be maintained and monitored for 5 years as required by LUC 20.25H.220. Annual monitoring reports are to be submitted to Land Use each of the five years. Photos from selected photo points will be included in the monitoring reports to document the planting. The following schedule and performance standards apply and are evaluated in the report for each year:

***Goal:***
*Establish vegetation in the slope buffer.*

***Objectives:***
*Plant 3 species of trees, 3 species of shrub, and 3 species of ground cover in the reduced slope buffer*

***Monitoring Performance Standards:***
*Year 1 (from date of plant installation)*

- *100% survival of all installed plants and/or replanting in following dormant season to reestablish 100%*
- *0% coverage of invasive plants in planting area*

*Year 2 (from date of plant installation)*

- *At least 90% survival of all installed material*
- *Less than 10% coverage of planting area by invasive species or non-native/ornamental vegetation*

*Year 3, 4, & 5 (from date of plant installation)*

- *At least 85% survival of all installed material*
- *At least 35%(Yr3), 50%(Yr4), 70%(Yr5) coverage of the planting area by native plants in each year respectively*
- *Less than 10% coverage by invasive species or non-native/ornamental vegetation*

Annual monitoring reports are to be submitted to Land Use each of the five years. The reports, along with a copy of the planting plan, can be sent to Reilly Pittman at rpittman@bellevuewa.gov or to the address below:

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012

Bellevue, WA 98009-9012

Authority: Land Use Code 20.30P.140; 20.25H.220
Reviewer: Reilly Pittman, Development Services Department

6. **Maintenance Assurance Device:** A maintenance assurance device in an amount equal to 100% of the cost of labor and materials for the maintenance and monitoring shall be held for a period of three years from installation. Release of this assurance device is contingent upon receipt of documentation reporting successful establishment in compliance with the performance standards stated in condition of approval #6 above. Land Use inspection of the planting after 5-years is required to release the surety.

   Authority: Land Use Code 20.25H.220
   Reviewer: Reilly Pittman, Development Services Department

7. **Land Use Inspection:** Following installation of the mitigation planting the applicant shall contact Land Use staff to inspect the planting area prior to final building inspection. Staff will need to find that the plants are in a healthy and growing condition. Land Use inspection is also required to release the maintenance surety at the end of the 5-year monitoring period. Release of the maintenance surety is contingent upon successful monitoring and maintenance and submittal of the annual monitoring reports.

   Authority: Land Use Code 20.30P.140
   Reviewer: Reilly Pittman, Development Services Department

8. **Hold Harmless Agreement:** The applicant shall submit a hold harmless agreement in a form approved by the City Attorney which releases the City from liability for any damage arising from the location of improvements within a critical area buffer in accordance with LUC 20.30P.170. The hold harmless agreement is required to be recorded with King County prior to building permit issuance. Staff will provide the applicant with the hold harmless form.

   Authority: Land Use Code 20.30P.170
   Reviewer: Reilly Pittman, Development Services Department

9. **Noise Control:** Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

   Authority: Bellevue City Code 9.18
   Reviewer: Reilly Pittman, Development Services Department

## PROJECT INFORMATION

| | |
|---|---|
| ZONING DTSTRICT | R-2.5 |
| PROPERTY OWNER | T & S MANAGEMENT LLC |
| PARCEL NUMBER | 272505-9146 |
| GROSS LOT AREA | 16,500 S.F. |
| STEEP SLOPE AREA | 1,638 S.F. |
| NET LOT AREA | 14,862 S.F. |

## STRUCTURAL LOT COVERAGE

| | |
|---|---|
| MAX. LOT COVERAGE FOR STRUCTURE | 35% |
| (14,862 x .35 = 5,201) | 5,201 S.F. |
| BUILDING FOOTPRINT | 3,487 S.F. |
| FRONT PORCH | 120 S.F. |
| CANTILEVERED FLOOR | 54 S.F. |
| PERVIOUS DECK | 207 S.F. |
| TOTAL STRUCTURAL AREA | 3,868 S.F. |
| LOT COVERAGE | 26.0% (OK!) |

## IMPERVIOUS SURFACE COVERAGE

| | |
|---|---|
| MAX. LOT COVERAGE FOR STRUCTURE | 50% |
| (14,862 x .50 = 7431) | 7,431 S.F. |
| STRUCTURAL AREA (EXCLUDING PERVIOUS DECK) | 3,661 S.F. |
| EAVES | 413 S.F. |
| DRIVEWAY | 874 S.F. |
| TOTAL IMPERVIOUS AREA | 4,948 S.F. |
| IMPERVIOUS SURFACE COVERAGE | 33.3 % (OK!) |

## FLOOR AREA SUMMARIES

| HEATING FLOOR AREA | |
|---|---|
| MAIN FLOOR | 3,013 SF |
| UPPER FLOOR | 1,134 SF |
| UPPER FLOOR (A.D.U.) | 800 SF |
| TOTAL HEATING FLOOR AREA | 4,947 SF |
| UNFINISHED LOWER FLOOR | 1,696 SF |
| GARAGE | 528 SF |

## GREENSCAPE

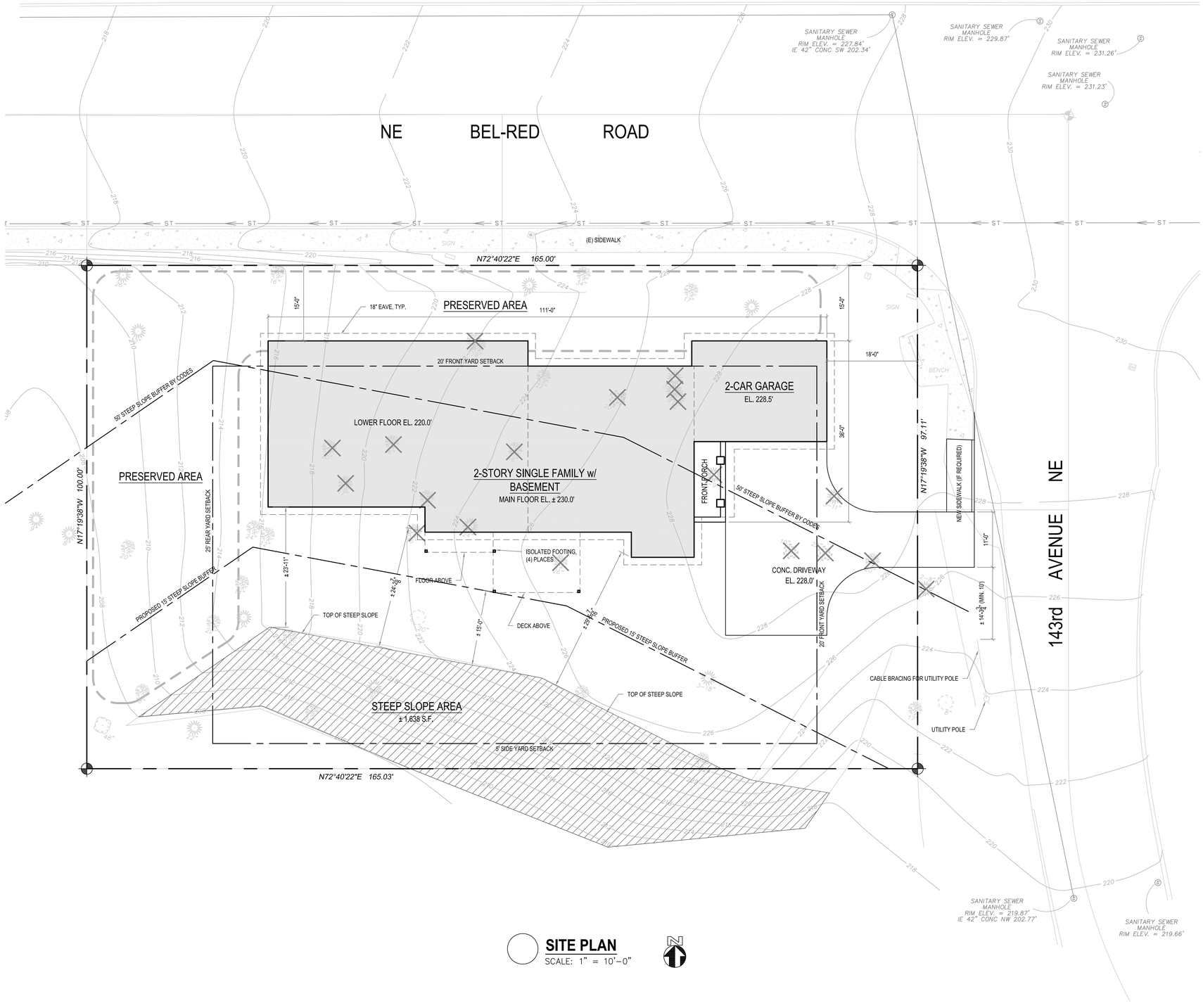
| | |
|---|---|
| FRONTYARD SETBACK AREA | 1,997 S.F. |
| LAWN | 1,695 S.F. |
| GREENSCAPE PERCENTAGE | 84.8% (50% MIN.) |

## RETENTION OF SIGNIFICANT TREES

| | |
|---|---|
| DIAMETER OF EXIST. SIGNIFICANT TREES | 926" |
| DIAMETER OF REMOVED TREES | 319" |
| DIAMETER OF RETENTIVE TREES (30% MIN.) | 607" (65% --> OK!) |

## LEGAL DESCRIPTION

LOT R4, CITY OF BELLEVUE SHORT PLAT NO. 77-60, RECORDED UNDER RECORDING NO. 7709120909, RECORDS OF KING COUNTY, WASHINGTON; SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.




**SITE PLAN**
SCALE: 1" = 10'-0"


CHC ARCHITECTS
526 14th Ave W
Kirkland, WA 98033
(M) 425.785.3992
(P) 425.285.9911
cchang03@yahoo.com


# TIAN RESIDENCE

1603 143rd AVE NE BELLEVUE WA 98007

| NUMBER | DATE | DESCRIPTION OF REVISIONS |
|---|---|---|
| | 06-11-2012 | CRITICAL AREA LAND USE PERMIT |
| | 08-29-2012 | REVISION ON HOUSE LOCATION |

SHEET TITLE
**SITE PLAN**

JOB NUMBER

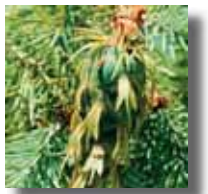
SHEET NUMBER
**A1**

GEOLOGICAL HAZARDS TEMPLATE


Oceanspray


Thimbleberry


Mock Orange


Douglas-fir

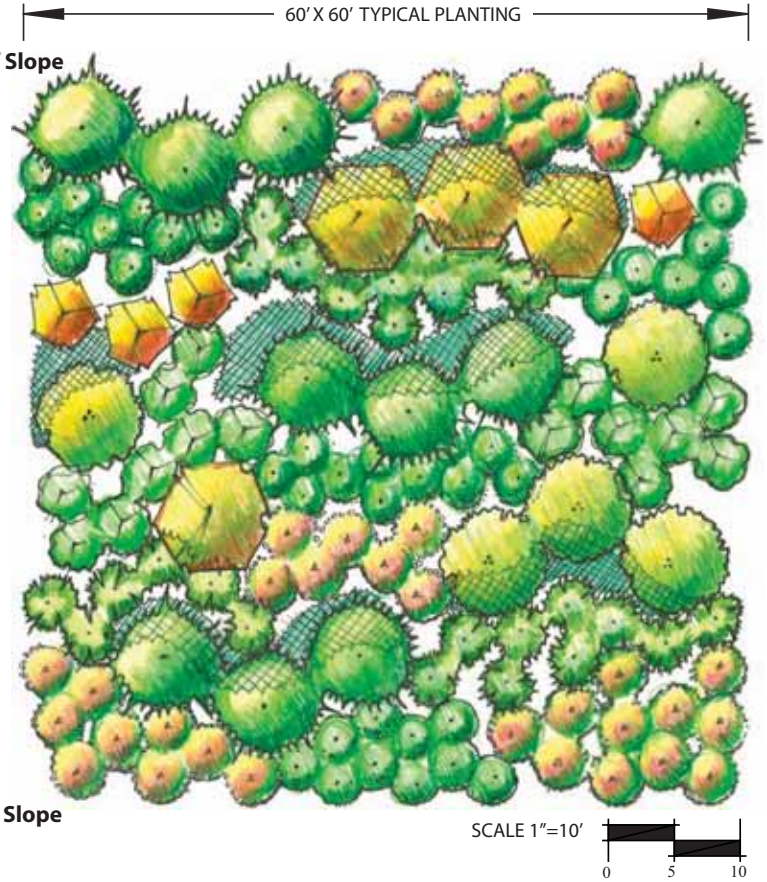
# Geological Hazards

## Steep Slope Planting Template
for ***Sunny*** and ***Shady*** Sites

**A1**

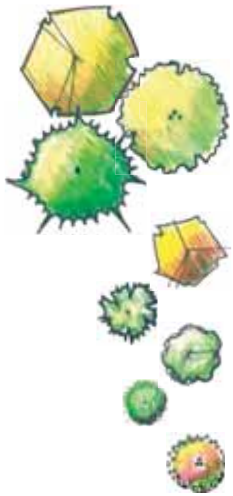


## GEOLOGICAL HAZARDS (STEEP SLOPE) PLANTING TEMPLATE

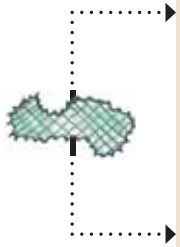



Steep slopes commonly have fragile, erodible soils. Planting can be difficult to establish in these areas as gravity, wind, and rain have a tendency to pull nutrient-rich soil down the slope. In addition, sunny sites require drought-tolerant plants, while both sunny and shady sites require plants with strong, root systems to keep soil intact. On the next two pages you will find one legend designed for sunny, steep sites and one designed for shady, steep sites. The plants chosen for these templates are known for drought tolerance and soil-binding characteristics. With the successful establishment of plants on steep slopes, the potential for erosion decreases. For additional information on Steep Slopes, refer to the section on *Geological Hazard Areas* in *Chapter One* and the City's Critical Areas Ordinance. Note, these templates are to be used for stable and undisturbed sloping sites. If your site has experienced a landslide or substantial erosion, do not use this template; consult a professional.

## PLANT LEGEND FOR SUNNY SITES



| LATIN NAME/ COMMON NAME | TYPICAL SPACING/ AVERAGE HEIGHT | CHARACTERISTICS |
|---|---|---|
| **TREES** | | |
| *Acer macrophyllum*/ Big-leaf maple | 9 feet on center/ 75 feet | Yellow fall color, provides understory shade, largest leaf of all maples |
| *Alnus rubra*/ Red alder | 9 feet on center/ 60 feet | Vigorous grower, provides cover quickly for other plants |
| *Pseudotsuga menziesii*/ Douglas-fir | 9 feet on center/ 100 feet | Highly adaptable, fast grower |
| **SHRUBS** | | |
| *Corylus cornuta*/ Beaked hazelnut | 6 feet on center/ 11 feet | Edible acorn, wildlife food. Small understory tree, yellowish fall color |
| *Holodiscus discolor*/ Oceanspray | 4.5 feet on center/ 7 feet | Spectacular blossom; attracts hummingbirds and butterflies |
| *Philadelphus lewisii*/ Mock orange | 4.5 feet on center/ 8 feet | Fragrant white blossom |
| *Rubus parviflorus*/ Thimbleberry | 4 feet on center/ 8 feet | Delicious edible berries, fast grower, likes sun |
| *Symphoricarpos albus*/ Snowberry | 4.5 feet on center/ 5 feet | White berries, proven performer in tough conditions |
| **GROUNDCOVERS & PERENNIALS** | | |
| *Arctostaphylos uva-ursi*/ Kinnikinnick | *24 in. on center/ 6-8 in. | Evergreen groundcover, great for rockeries and full sun areas |
| *Fragaria chiloensis*/ Coastal strawberry | *24 in. on center/ 4-6 in. | Tough, highly adaptable groundcover w/ red stems and edible berries |
| *Festuca idahoensis*/ Idaho fescue | *24 in. on center/ 2.5 feet | Bluish leaves, clumping |
| *Polystichum munitum*/ Sword fern | *24 in. on center/ 5 feet once mature | Semi-evergreen fern, highly adaptable |
| *Epilobium angustifolium*/ Fireweed | *24 in. on center/ 1.5-2 feet | Big purple flowers on a tall stem |

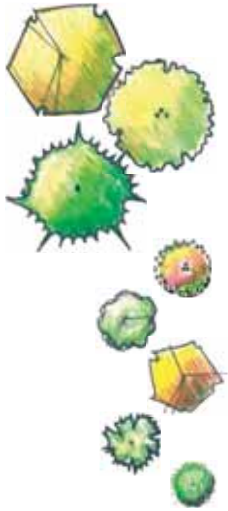


* *Indicates plants are to be triangularly spaced for the area shown. See page 23 for triangular spacing.*

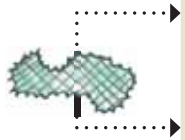
# A1-Sun



## PLANT LEGEND FOR SHADY SITES



| LATIN NAME/ COMMON NAME | TYPICAL SPACING/ AVERAGE HEIGHT | CHARACTERISTICS |
|---|---|---|
| **TREES** | | |
| *Acer macrophyllum*/ Big-leaf maple | 9 feet on center/ 75 feet | Yellow fall color, provides understory shade, largest leaf of all maples |
| *Alnus rubra*/ Red alder | 9 feet on center/ 60 feet | Vigorous grower, provides cover quickly for other plants |
| *Thuja plicata*/ Western red cedar | 9 feet on center/ 150 feet | Fragrant, adaptable to many sites |
| **SHRUBS** | | |
| *Acer circinatum*/ Vine maple | 4.5 feet on center/ 20 feet | Bright red fall color, small understory tree, grows well in shade |
| *Amelanchier alnifolia*/ Western serviceberry | 4.5 feet on center/ 20 feet | Fragrant flowers, edible red to purple berries |
| *Corylus cornuta*/ Beaked hazelnut | 6 feet on center/ 11 feet | Edible acorn, wildlife food, small understory tree, yellowish fall color |
| *Oemleria cerasiformis*/ Osoberry | 4.5 feet on center/ 10 feet | Berries attract birds, first shrub to leaf out in spring |
| *Sambucus racemosa*/ Red elderberry | 4 feet on center/ 15 feet | Edible berries, fast grower, graceful form with age |
| **GROUNDCOVERS & PERENNIALS** | | |
| *Arctostaphylos uva-ursi*/ Kinnikinnick | *24 in. on center/ 6-8 in. | Evergreen groundcover, great for rockeries and full sun areas |
| *Asarum caudatum*/ Wild ginger | *24 in. on center/ 6-8 in. | Tough groundcover, great for planting under shrubs and trees |
| *Polystichum munitum*/ Sword fern | *24 in. on center/ 5 feet once mature | Semi-evergreen fern, highly adaptable |



* *Indicates plants are to be triangularly spaced for the area shown. See page 23 for triangular spacing.*

# A1-Shade

# MITIGATION and RESTORATION MONITORING GUIDANCE

The following monitoring guidance is intended assist project applicants meet code requirements, achieve positive mitigation outcomes and save both time and money. Bellevue's critical areas ordinance (CAO), contained in section 20.25H of the Land Use Code, states that a mitigation and restoration plan must be developed anytime temporary or permanent impacts are proposed for critical areas, their buffers, or their structure setbacks. One key element of the mitigation and restoration plan is a monitoring program with performance measures that ensure the plan's goals and objectives are being met. The monitoring program allows for recognition of performance deficiencies and corrective actions to be taken as part of ongoing maintenance actions.

## MONITORING TIMEFRAME

The Bellevue's CAO requires monitoring at various timeframes depending on the scope of the mitigation and restoration effort. When mitigation is required to lessen unavoidable impacts to critical areas and their functions, then a minimum of 5 years of mitigation monitoring is required. When voluntary critical area restoration is proposed, the monitoring timeframe may be reduced to 3 years. The CAO also requires that temporary disturbance restoration be monitored for at least one year from the date of project acceptance. In situations where the resource is of relatively high value or the impacted functions may take longer or be more difficult to replicate, the requirements may be lengthened beyond 5 years. If routine monitoring reveals the site is not meeting the performance standard, then corrective action must be taken within 30 days or the monitoring program will repeat the current year until standard is met.

Whenever a project is subject to greater monitoring timeframes required by state or federal permitting authorities, the city does not require that a separate monitoring program be developed. The city will accept the approved program and monitoring reports, even if city's monitoring schedule expires before that of the federal or state agencies'.

## MONITORING METHODOLOGY

For smaller mitigation and/or restoration areas (<500 square feet) the entire area should be monitored. For larger areas (>500 square feet), the use of sample plots should be used and the results extrapolated for the entire area based on the percentage sampled of the entire mitigation area. The sample plots (circular, $100^{th}$-acre plots with radius of 11.8 feet) should be randomly placed throughout the area with one plot for each 5,000 square feet of mitigation area. For mitigation areas of less than 5,000 square feet, there should be at least one plot.

In years 1 and 2, the monitoring focuses on plant survival and invasive species exclusion. Plant survival is reported as a percentage of surviving native plants to the total number plants installed. Invasive species is reported by estimating the percent area of ground covered by foliage from invasive, non-native species. In year 3, the monitoring program adds in an estimation of percent ground covered by native plants. The estimate includes both installed and naturally volunteering natives. In years 4 and 5, the percent plant survival is removed, and only percent native plant and invasive species coverage are tracked.

At least three photo points should be shown on the project plans. These points should be clearly marked in the field with stakes. Photographs from each of these points should be included with each monitoring report.

**MINIMUM MONITORING and REPORTING SCHEDULE & PERFORMANCE MEASURES**

| Length of Monitoring Program | | | Monitoring Year & Monitoring Schedule | | Reporting Schedule | Native Plant Establishment and Survival[3] | Native Vegetation Cover[4] | Invasive Cover |
|---|---|---|---|---|---|---|---|---|
| **Mitigation requires 5 years year** | **Restoration requires 3 years** | **Temporary disturbance restoration requires 1** | **Year 1** | If mitigation is installed during Fall or Winter, then first monitoring event shall occur at the beginning of the growing season (April[1]), to assess leaf emergence and shoot growth of the installed plants; and then be monitored again at the end of the growing season (September-October[2]). | [1]May 1st [2]November 30th | 100% | N/A | 0% |
| | | | **Year 2** | End of the second growing season (September-October) after installation approval. | November 30th | 90% | N/A | <10% |
| | | | **Year 3** | End of the third growing season (September-October) after installation approval. | November 30th | 85% | >35% | <10% |
| | | | **Year 4** | End of the fourth growing season (September-October) after installation approval. For mitigation projects that are successful at the end of Year 3, this monitoring event is waived. | November 30th | N/A | >50% | <15% |
| | | | **Year 5** | End of the fifth growing season (September-October) after installation approval. | November 30th | N/A | >70% | <15% |

[3]All live, installed plants should be counted and then compared as a percentage to the overall quantity installed.

[4] Naturally established native plants (volunteers) may be considered towards percent cover.

## MONITORING REPORTS

Monitoring reports not using the *Bellevue's Mitigation and Restoration Monitoring Form* (see below) shall contain the information in the following outline and be no longer than five pages, not including appendices.

(1) Project overview (1-2 pages), including:
   a. Bellevue permit number
   b. Project address
   c. Name and contact information of applicant and consultant
   d. Name and contact information of party responsible for conducting the monitoring
   e. Date(s) monitoring was performed
   f. Date mitigation and/or restoration was installed
   g. Performance standards and whether they are being met
   h. Dates and description of any corrective or maintenance actions that have occurred since installation or the last report submission
   i. Specific recommendations for any corrective measures or maintenance actions to be performed until the next monitoring event

(2) The body of the report (2-3 pages)should contain the following information with headings:
   a. Description of the permitted project
   b. Mitigation and restoration plan's goals and objectives
   c. Description of monitoring methodology
   d. Summary of monitoring results

(3) Appendices to the report should include:
   a. Project vicinity map (8.5" x 11")
   b. Permitted project site plan (11" x 17")
   c. Mitigation and restoration plan maps (11" x 17")
   d. Copy of data forms or field notes
   e. Photo documentation

## ASSURANCE DEVICES

To ensure that the mitigation effort is successful and that all of the performance measures are satisfied, a *Maintenance Assurance Device* will be held in a private account of the applicant's choosing. The amount of the assurance device shall be equal to 100% of the value of the labor and materials needed to complete the mitigation effort. The determination of the value shall be based on cost estimates for the labor and materials from qualified contractors and plant suppliers. The assurance device will be released back to the project applicant after the final required monitoring report has been received that verifies that all of the performance standards have been met.

| Permit Number: | Monitoring Date: | Reporting Date: |
|---|---|---|
| Applicant Name: | Consultant Name and Company: | |
| Applicant Phone or Email: | Consultant Phone or Email: | |

**Any criteria not meeting standard shall be accompanied by the attached CORRECTIVE ACTION ADDENDUM**

| Length of Monitoring Program **(Circle one)** | | | Monitoring Year & Monitoring Schedule **(Circle the year)** **Date of Installation:_____** | | Reporting Deadline **(Circle one)** | Plant Survival | Native Vegetation Cover | Invasive Cover |
|---|---|---|---|---|---|---|---|---|
| | | | | | | **(Write-in the measured performance on the line)** | | |
| **Mitigation requires 5 years** | **Restoration requires 3 years** | **Restoration of temporary disturbance requires 1 year** | **Year 1** | If mitigation is installed during Fall or Winter, then first monitoring event shall occur at the beginning of the growing season (April[1]), to assess leaf emergence and shoot growth of the installed plants; and then be monitored again at the end of the growing season (September-October[2]). | [1]May 1st [2]November 30th | **100%** Performance: _____ At Standard? YES or NO | N/A | **0%** Performance: _____ Standard met? YES or NO |
| | | | **Year 2** | Monitor at the end of the second growing season (September-October) after installation approval. | November 30th | **90%** Performance: _____ At Standard? YES or NO | N/A | **<10%** Performance: _____ At Standard? YES or NO |
| | | | **Year 3** | Monitor at the end of the third growing season (September-October) after installation approval. | November 30th | **85%** Performance: _____ At Standard? YES or NO | **>35%** Performance: _____ At Standard? YES or NO | **<10%** Performance: _____ At standard? YES or NO |
| | | | **Year 4** | Monitor at the end of the fourth growing season (September-October) after installation approval. For mitigation projects that are successful at the end of Year 3, this monitoring event is waived. | November 30th | N/A | **>50%** Performance: _____ At Standard? YES or NO | **<15%** Performance: _____ At Standard? YES or NO |
| | | | **Year 5** | Monitor at the end of the fifth growing season (September-October) after installation approval. | November 30th | N/A | **>70%** Performance: _____ At Standard? YES or NO | **<15%** Performance: _____ At Standard? YES or NO |

## CORRECTIVE ACTIONS ADDENDUM

**Permit Number:** _____ **Monitoring Date:** _____

**Monitoring Year (circle):** $1^{spring}$ $1^{fall}$ 2 3 4 5

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**Performance Standard (circle all that apply):** Plant Survival Native Coverage Invasive Coverage

**Corrective Action:**

_____

_____

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**Timing of Corrective Action:** _____

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**Performance Standard (circle all that apply):** Plant Survival Native Coverage Invasive Coverage

**Corrective Action:**

_____

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**Timing of Corrective Action:** _____

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**Performance Standard (circle all that apply):** Plant Survival Native Coverage Invasive Coverage

**Corrective Action:**

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**Timing of Corrective Action:** _____

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**Land Use Planner Verification:** _____